

the powers-that-be will be moved to take some action by the recent revelations.

The annual report of the Medical Research Council is notable this year for its strong assertion that the policy of the Council has always been the promotion of clinical research, and, that while reports in the past have, perhaps, contained more about laboratory than clinical investigations, this was largely because there has been hitherto no body of scientific workers in this country exclusively engaged in the study of disease and its treatment in the living patient, unencumbered by the responsibilities of professional practice or routine laboratory duties. It is true that for some years Sir Thomas Lewis has directed a unit for clinical research at University College Hospital, but this was almost the only work of its kind. Now, however, following the endowment of this director's post by the Rockefeller Foundation, the Council are able to sponsor another scheme, and it is announced that a research department in Neurological Medicine is to be set up at the National Hospital, Queen Square, with a full-time director, while several studentships are to be provided by the Halley-Stewart trustees. At the same time it is stated that various universities are seeking to create full-time professorships of medicine and surgery where men may devote their lives to clinical research with some security of tenure. Meanwhile the Council are doing much to encourage young men to train themselves for such senior posts and the present report contains accounts of the large volume of clinical research subsidized by the Council.

The development of the British Post-Graduate School has been held up by the economic situation, like many other laudable objects, but an important step forward was recently taken in the shape of a decision by the London County Council. It will be remembered that the scheme drawn up centred round the Hammersmith Hospital (a London County Council institution), and an agreement has been drawn up between the Council and the Post-Graduate Medical School (a constituent school of the University of London). Building operations are to be set in hand without delay, and the many details as regards administration and staff of the hospital, etc. are set out in the agreement. This is a great step forward, and it seems likely that the new school will rapidly come into being.

In the words of *The Lancet*, the General Medical Council has recently granted "a new and enlarged charter to pædiatrics," and this official recognition of the importance of this subject in the curriculum will have a big influence on the future development of this branch of medicine in this country. In view of the fact that many practitioners find nearly 50 per cent of their patients are children it seems quite absurd that at present it is possible to pass the

final examination without any knowledge of pædiatrics. At the annual meeting last year of the British Pædiatric Association four strong resolutions were passed unanimously and forwarded to the General Medical Council, and no doubt it was this pressure, together with reports from the inspectors of examinations, which led the Council to decide that in the future the final examination should include a test of the candidate's knowledge of infant hygiene and disease in childhood. This is a big step forward, and it now remains for the teachers of pædiatrics to see that adequate recognition and time is given to their subject.

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## Topics of Current Interest

### Iodized Salt

Following the recommendations of a conference on iodized salt, held late in 1930, the National Research Council appointed an Associate Committee on Iodized Salt, with representation from the Federal Departments of Agriculture and Health, the Connaught Laboratories and the Universities of Manitoba, McGill and Toronto. This committee held its first meeting in Ottawa on March 4, 1932.

A report on iodized salt, prepared by Miss M. E. Whalley of the Division of Research Information, was presented to the committee, embodying the results of a survey carried out by the Council on the prevalence of goitre and the distribution of iodized salt throughout Canada. The survey showed goitre to be practically absent in Nova Scotia and New Brunswick and quite uncommon in Quebec. In Ontario, its prevalence is quite noticeable at Kingston, increases about the Muskoka district and in the vicinity of Windsor, still increases from North Bay to Cochrane, and from Sudbury to Sault Ste. Marie, then diminishes again at Port Arthur and Fort William. It has also been found to be prevalent in Saskatchewan in the vicinity of Prince Albert, while in Alberta and British Columbia it diminishes again, particularly on the coast.

A survey of the comparative sales of free running and iodized salt in Canada for 1929 and 1930 shows that in the districts where goitre is prevalent there is a greater sale of iodized salt than of free running, and where goitre is uncommon, the sale of iodized salt is much less. In most districts the proportion of iodized salt used is increasing.

After a detailed consideration of Miss Whalley's report the committee reached the following tentative conclusions:—

1. That iodine is required by all animals, including man, and especially those in the pregnant condition.

2. That, since the iodine-content of food and drinking water varies greatly throughout Canada, the necessity for the administration of iodine also varies in different parts of the country.

3. That the method of administering iodine as sodium iodide or potassium iodide in salt is satisfactory.

4. *That the proportion of potassium iodide now used in iodized salt in Canada, one part in 10,000, is unnecessarily high.* (The italics are ours.—Ed.). It is considered that one part of sodium or potassium iodide in 200,000 would be sufficient and that one part in 100,000 would be satisfactory as a maximum.

5. That the addition of iodides to the soil may be expected to increase the iodine content of plant foods grown thereon, but this procedure is considered to have no special advantage over the direct administration of iodine in iodized salt and is regarded as very wasteful.

6. That consultations with the manufacturers are required regarding methods of mixing and storage, in order to provide for a reasonably constant amount of iodine in table salt.

7. That the National Research Council should undertake in conjunction with the manufacturers such research as may be necessary to give effect to the committee's recommendations.

8. That if an iodine survey of food and water supplies in Canada is to be carried out, it should be undertaken by a national body such as the National Research Council.

9. That the widespread sale of endocrine preparations containing thyroid is inadvisable from the standpoint of the health of the community, except under a doctor's prescription, and that otherwise the sale of these preparations for the treatment of goitre or obesity cases should not be permitted.

10. That the question of the compulsory iodization of salt be kept on the agenda for future discussion.

11. That when the necessary information has been obtained the Department of Pensions and National Health be asked to provide statutory regulations.

Following the recommendations of the committee, steps are being taken by the Council to get in touch with manufacturers regarding the problems of mixing and storage of iodized salt. (Fifteenth Annual Report, National Research Council, Ottawa, 1931-32).

#### **Antimony Poisoning from Enamelled Vessels**

Several outbreaks of antimony poisoning in this country of late years have been traced to the use of enamelled vessels of inferior quality

for the preparation of acid drinks such as lemonade. Antimony oxide is widely used in place of tin oxide as an opacifying agent in the enamelling of hardware, and it is readily attacked and disintegrated by acid, with the result that the antimony goes into solution. A leaflet\* just issued by the Ministry of Health describes three such outbreaks, all of them due to the preparation of lemonade in enamelled jugs or buckets. At Newcastle-upon-Tyne, in 1928, 70 employees of a large firm became ill, complaining of a burning sensation in the stomach, colic, nausea, vomiting, and collapse; the drink was made with lemonade crystals containing 18 per cent of tartaric acid, and a tumblerful of the fluid contained grs. 1½ of antimony calculated as tartar emetic, the emetic dose being gr. ½—1. At Folkestone, in 1929, 25 people were poisoned by lemonade made with fresh lemons in jugs whose enamel contained 9 per cent of antimony oxide, and it is noteworthy that the jugs, when sold, bore labels saying "we guarantee all articles having this brand to be perfectly safe in use and free from any injurious substances." In the third outbreak, in a large London hospital last December, there were 65 cases of poisoning, and in some of them there was serious collapse. Here again the lemonade was made from fresh fruit. "It is the cheap low-grade enamels," the memorandum says, "that are the danger. These enamels are made from a mixture relatively low in silica content and are fired at a comparatively low temperature. They are not acid-proof and appear to be readily dissolved by citric, tartaric, acetic, and other acids present in foods. The antimony oxides disseminated throughout the enamel are thus exposed to the action of these acids and any trioxide present goes into solution."—*The Lancet*, 1933, 1: 561.

#### **Medicine and the Experimental Laboratory**

A recent contributor<sup>1</sup> to current medical literature has commented on the change that has taken place in diagnosis and therapeutics through the adaptation of chemistry, physics and some of the biological sciences to clinical needs. During the past two decades, signal advances have been made: in internal medicine through a better understanding of the chemistry of the blood under various conditions; in electrocardiography and physical therapy by the application of newer developments in physics; and in the control of infectious diseases by the use of recent discoveries in bacteriology. The view has frequently been voiced that the

\* Antimony poisoning due to the use of Enamelled Vessels, Ministry of Health. Memo 117/Med. H. M. Stationery Office, London, 1933, 1d.

1. Smith, A. H., Practitioners Series, New York, D. Appleton & Co., 1932, 1: 849.

obvious tendency to depend increasingly on the laboratory for aid in diagnosis or in following the response to treatment is not particularly encouraging; fear is expressed lest the product of modern training lose the *tactus eruditus*. To other observers it is plain that the rise of laboratory medicine is part of a cycle of change and that the pendulum of interest in this direction has already begun to swing backward somewhat. However, it must be recognized that many highly desirable permanent changes have been introduced into medicine during this period of readjustment.

A particularly able defense of the importance of scientific experimentation to medicine has recently been made by Mendel.<sup>2</sup> This recognized leader in the field of nutrition has analyzed the question both searchingly and with a benign attitude. He begins by pointing out how rare are the opportunities to conduct satisfactory experiments on human subjects. The difficulty of controlling conditions adequately as well as the inadvisability of bringing about abnormal deviations have restricted the investigator to the use of human subjects in whom functional or structural abnormalities are accidental. Inevitably, therefore, the investigator has been forced to study disease or to practice surgical operations on laboratory animals. With cogent illustrations, Mendel emphasizes the large part of the available knowledge of physiology and of medicine in general that has been derived directly or whose development has depended on information obtained from studies on laboratory animals, and he points out that continued control of infectious diseases and the possibility of future discoveries in physiology would be lost if the misguided efforts of the antivivisectionists should be successful.

What attitude should the physician take toward the experimental sciences allied to medicine? With a fine sense of values Mendel agrees that, whereas his primary duty and interest should be with the understanding and treatment of disease as manifested in the patient, he must not fail to recognize the significance to medicine of the contributions made by investigators in the laboratory. Furthermore, an open attitude of mind must be cultivated lest one fail to appreciate that the practical value of experimental studies is not always immediately demonstrable. "That person must indeed be endowed with unerring judgment who can readily distinguish between scientific value and ultimate utility in research." Abnormal conditions that represent disease cannot be adequately studied or understood without a satisfactory appreciation of the normal behaviour of the organism. It is of the utmost importance, therefore, that there be maintained the freedom and facilities for renew-

ing acquaintance with normal life processes in the experimental laboratory.

The question of scientific experiment and medicine is of perennial interest. Medicine is constantly expanding the scope of its interest, and members of the profession should take a corresponding place in society. Surely there is no greater aid to perspective, poise and effective activity than an adequate appreciation of the manifold pathways by which have emerged those contributions which, in the final analysis, constitute medicine.—Editorial, *J. Am. M. Ass.*, 1933, 100: 500.

### The Defects of the Modern Boy

Mr. C. H. Blakiston, headmaster of Lancing College, speaking at a meeting of the Section of Mental Disorder of the British Medical Association, declared that there was an astonishing contrast between the young people of the present day and the young people whom he had to teach 30 years ago.

At the beginning of this century, said Mr. Blakiston, mechanized life meant little, and many boys were unaffected by the modern universal craze for speed. The boy of to-day expected to be taken everywhere by motor-car. He expected to have a gramophone. He was interested in wireless, and he got his musical experience practically for nothing. He was interested in flying and speed-boats, and he doubted if 10 per cent could saddle a horse. He asked a boy to saddle a horse and he did not know which end to begin. There was a craving for excitement. Boys feared being alone. They feared loneliness and boredom. That state of things had to a large extent destroyed the old spirit of adventure and had done much to impair the power of initiative. This was noticeable in the unwillingness shown by so many boys of 18 or 19 to go abroad and seek their fortune and career. One noticed to-day an absence of the old dare-devilry and mischievousness of the older generation. One of the most difficult things was to persuade boys that cricket was worth while. The average boy disliked cricket because it was "slow".

As a result of the War there was a sense of fear in the minds of children to-day. In giving corporal punishment, as he had to do, he was bound to notice a physical fear of pain which most modern boys made no attempt to hide. There was also a real lack of principle. It used to be held that an Englishman's word was his bond, and it used to be said that an English boy seldom lied. Was that true to-day? It used to be said that the only time when a boy would lie was under that strange code of schoolboy honour not to betray a friend. That was not true to-day. One of the greatest difficulties in administering a school was the extraordinary

2. Mendel, L. B., *Science*, 1932, 76: 393.

lack of truthfulness constantly met. He said to a boy, "You know that it is a lie," and he replied, "Oh, yes, but it has gone down quite well so far." That showed an absolute absence of the abstract principle of truth. Stealing money was regarded as a very serious offence, if not unforgivable, but stealing books or gramophone records was regarded as an extended form of borrowing. A fault among boys was what was called "peacockry," when their vanity caused them to pinch anything to adorn their persons.—*The Weekly Times*, Aug. 4, 1932.

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## Abstracts from Current Literature

### Medicine

**What Happens eventually to Patients with Hyperthyroidism and Significant Heart Disease following Subtotal Thyroidectomy.** Rosenblum, H. H. and Levine, S. A., *Am. J. M. Sc.*, 1933, 185: 219.

The authors have studied 69 cases of hyperthyroidism which showed evidence of gross disturbance in the cardiovascular mechanism. A subtotal thyroidectomy was performed in every case and the entire group followed for an average of 4 to 5 years. The average pre-operative basal rate was plus 51.1 per cent, and the average metabolism of the series after operation was plus 4.8 per cent.

As regards changes in the blood pressure before and after thyroidectomy, a group of 23 patients in whom the initial blood pressure was 179 mm. of Hg. was found to have exactly the same pressure after 3.3 years; a second group of 43, in whom the average pre-operative pressure was 153 mm. of Hg. had an average blood pressure of 156 after 3.3 years; a third group of 20 had a normal pressure before and 3.3 years after operation. Roentgenographic measurements of the hearts of 10 patients before and twelve weeks after subtotal thyroidectomy (all with heart disease) showed identical measurements before and after this post-operative period of time. As regards murmurs, there was a specific notation of murmurs before and after operation in 27 cases. In all of these systolic murmurs were present. In 16 the systolic murmur disappeared after operation; in 8 it became less intense; and in 3 it was unchanged. Eight of the 27 had diastolic murmurs; six of these had mitral stenosis. Changes in the irregularities of the heart were common. Of the 69 cases 32 had permanently established auricular fibrillation, and an additional 12 cases showed paroxysmal auricular fibrillation. Following operation, recurrent auricular fibrilla-

tion did not recur, but of 11 patients who had mitral stenosis, the irregularity persisted in 10; in the remaining case normal rhythm was established by the use of quinidine sulphate. Of the remaining 13, without mitral stenosis, 6 reverted to normal rhythm after operation and remained normal for years. There were 9 cases of angina pectoris in the series. Seven of these had typical attacks while at rest. The average duration of the anginal symptoms before operation was 31 months. In every instance the attacks either completely disappeared or recurred in a mild form at very rare intervals after operation.

The authors were impressed by the rarity of congestive heart failure in young patients with hyperthyroidism and the uniformity of other forms of heart disease, as mitral stenosis, etc., in those with significant cardiac embarrassment. It seems probable, therefore, that hyperthyroidism is rarely the sole cause of heart failure. The circulatory improvement which followed subtotal thyroidectomy in these cases with pre-operative heart lesions (mitral stenosis, angina pectoris, etc.), suggests to them the possibility of treating various forms of cardiac disease by means of subtotal removal of a normal thyroid gland. They cite one instance when this was done with striking clinical improvement. The authors caution against the use of quinidin therapy for auricular fibrillation in the pre-operative state. They feel that it has a place in dealing with auricular fibrillation persisting some months after operation, provided mitral stenosis is not present.

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**Some Unusual Complications of Hyperthyroidism.** Smith, C. and Sauls, H. C., *Ann. Int. Med.*, 1933, 6: 1097.

Obscure hyperthyroidism must be excluded in patients with heart disease in whom neither hypertension, the rheumatic syndrome, nor lues accounts for the condition. It may exist without a palpable thyroid. The heart is usually enlarged; mitral systolic or aortic diastolic murmurs may be present and disappear after thyroidectomy. The heart rate is usually rapid and the rhythm irregular. Auricular fibrillation is often present. The systolic blood pressure is usually increased and the pulse pressure increased. Præcordial pain without the usual signs of accompanying vascular disease should arouse the suspicion of thyrotoxicosis. Basal metabolism tests should be repeated, and, if not conclusive, the therapeutic iodine test may be done. Iodine should almost never be given, unless plans for operation have been made. Probably the only indication for digitalis in thyroid heart disease is congestive heart failure. Many cases of fibrillation associated with thyrotoxicosis fail to respond to digitalis, but the